

**Amendments to the Specification:**

Please replace paragraph [0003], line 2, on page 1, with the following rewritten paragraph:

[0003] In recent years, it has become important to use such materials in exit way lighting, such that an emergency exit way can remain lighted even after electrical power has been cut. With this type of material, the exit lighting absorbs light energy or radiation from the ambient lighting within a stairwell, for example, and can remain photoluminescent for long periods of time after the electricity has been cut. Very bright materials generally comprise phosphorescent materials such that the ambient light that they provide is very bright for an extended period of time, such as 12-24 hours.

Please replace paragraph [0008], line 5, on page 3, with the following rewritten paragraph:

[0008] For example, the photoemission extinction time that marks the cessation of afterglow phosphorescence was found to increase by a factor of 10 to 15 for  $\text{SrAl}_2\text{O}_4$  that is co-doped with about 1.5 mol% of Eu and Dy or Eu and one or more of the rare earth elements mentioned above. The extinction time is commonly defined as the time required for the afterglow photoemission to diminish to 0.032 millicandela per square meter ( $\text{mcd/m}^2$ ). This value, though somewhat arbitrary, is approximately 100 times the commonly accepted limiting light intensity that can be detected by the human eye.

Please replace paragraph [0029], line 8, on page 10, with the following rewritten paragraph:

[0029] These results appear counter intuitive for several reasons. First, the existing prior art of phosphor technology teaches that scandium additions are useful in stabilizing the recombination events that lead to very short duration phosphors such as occur in plasma screen technology applications. That is, scandium is taught as being used for improving the useful characteristics of short luminance durations. Further, scandium is a transition metal element, not a lanthanide rare earth element as taught in the prior art for photoluminescent materials. It therefore follows that because scandium possesses no f shell electrons, it is incapable of electron - hole reactions involving the  $4f \rightarrow 5d$   $4f^7 \rightarrow 4f^6 5d^1$  states. The possible energy / charge transfer events due to the electron - hole transitions that arise from these states are taught in the prior art as being responsible for the long persistence afterglow phenomenon in strontium aluminate that is doped with europium and additional co-activators. Thus, the lanthanide rare earths have been taught as preferred co-activator elements because of their electronic similarity to the europium ion. The effect observed with scandium additions is therefore outside or beyond what the prior art teaches in obtaining a material having long and relatively bright afterglow characteristics.

Please insert the following Abstract:

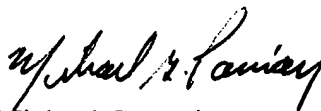
#### **ABSTRACT**

A photoluminescent phosphorescent material for emergency lighting and the like. An alkaline earth aluminate base material is alloyed with a lanthanide earth element and a transition metal element. When exposed to ambient lighting, the material of the present invention emits

light in dark areas even after the loss of electrical power. The addition of a transition metal element such as Scandium (Sc) provides longer and brighter photoluminescence than is expected by the use of a lanthanide element alone.

The above amendments are made to correct informalities and typographical errors noted in the specification. The Abstract has been added to comply with the Notice to File Missing Parts dated March 2, 2004. No new matter has been added. Entry of this amendment is respectfully requested.

Respectfully submitted,



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